

Shinichi Iizuka  
1923 Crown Plaza Boulevard  
Plainfield, Indiana 46168

Re: Registered Construction and Operation Status,  
109-12538-00053

Dear Mr. Iizuka:

The application from TOA (USA), LLC, received on July 26, 2000, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.1, it has been determined that the following metal automotive components and assemblies manufacturing plant to be located at Highway 67 South, Mooresville, Indiana, is classified as registered:

- (a) Metal Fabrication which consists of:
  - (1) Blanking press operation, identified as EP01, with a maximum capacity of 51,241 tons of metal per year;
  - (2) Metal Pressing operation, identified as EP02, with a maximum capacity of 45,534.5 tons of metal per year;
  - (3) Spot welding, identified as EP03, with a maximum usage of 25,290 tons of weld per hour;
  - (4) Arc welding, identified as EP04, with a maximum usage of 705 tons of weld per year;
  - (5) Laser cutting, identified as EP05, with a maximum capacity of 1786 tons of metal per year; and
  - (6) Metal cleaning, identified as EP06, with a maximum usage of 4,642,800 gallons of aqueous solution per year.
- (b) One (1) Electrodeposition Coating System, identified as EP07, with a maximum capacity of 105 automotive parts per hour. One (1) natural gas-fired paint dryer, identified as EP08, with a heat input capacity of 4.366 Million British Thermal Units per hour (mmBtu/hr). This paint dryer is controlled by a 3.572 mmBtu/hr afterburner; and
- (c) One (1) natural gas-fired steam boiler, identified as EP09, with a heat input capacity of 3.348 mmBtu/hr.

The following conditions shall be applicable:

1. Opacity Limitations

Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

2. Volatile Organic Compounds (Miscellaneous Metal Coating)

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating), the volatile organic compounds (VOC) content of coating used by the Electrodeposition Coating System, EP07 shall be limited to 3.5 pounds of VOC per gallon of coating less water for extreme performance coatings.

3. Particulate Matter (PM) Emissions (Indirect Heating Facilities)

Pursuant to 326 IAC 6-2 (Indirect Heating Facilities), the PM emissions from the 3.348 mmBtu/hr steam boiler, EP09 shall be limited to 0.6 lb/mmBtu, or an equivalent of 2.0 pounds per hour.

4. Particulate Matter Emissions (Process Operations)

Pursuant to 326 IAC 6-3.2 (Process Operations), the PM emission limit from the welding operation shall be limited to 9.3 pounds per hour. This limit shall be determined using the following equation:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour and  
P = process weight rate in tons per hour

This registration is the first air approval issued to this source. The source may operate according to 326 IAC 2-5.1.

An authorized individual shall provide an annual notice to the Office of Air Management that the source is in operation and in compliance with this registration pursuant to (326 IAC 2-5.1-2(f)(3)). The annual notice shall be submitted to:

Compliance Data Section  
Office of Air Management  
100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, IN 46206-6015

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Management (OAM) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Management

APD

cc: File - Morgan County  
Morgan County Health Department  
Air Compliance - Marc Goldman  
Permit Tracking - Janet Mobley  
Technical Support and Modeling - Michele Boner  
Compliance Data Section - Karen Nowak

<b>Registration Annual Notification</b>
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This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3).

<b>Company Name:</b>	<b>TOA (USA), LLC</b>
<b>Address:</b>	<b>Highway 67 South</b>
<b>City:</b>	<b>Mooreville</b>
<b>Authorized individual:</b>	<b>Shinichi Iizuka</b>
<b>Phone #:</b>	<b>(317) 839-6434</b>
<b>Registration #:</b>	<b>109-12538-00053</b>

I hereby certify that TOA (USA), LLC is still in operation and is in compliance with the requirements of Registration 109-12538-00053.

<b>Name (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Date:</b>

## Indiana Department of Environmental Management Office of Air Management

### Technical Support Document (TSD) for a Registration

#### Source Background and Description

Source Name: TOA (USA), LLC  
 Source Location: Highway 67 South, Mooresville, Indiana  
 County: Morgan  
 SIC Code: 3465  
 Operation Permit No.: 109-12538-00053  
 Permit Reviewer: Aida De Guzman

The Office of Air Management (OAM) has reviewed an application from TOA (USA), LLC relating to the construction and operation of the following equipment used in the manufacture of various metal automotive components and assemblies:

- (a) Metal Fabrication which consists of:
  - (1) Blanking press operation, identified as EP01, with a maximum capacity of 51,241 tons of metal per year;
  - (2) Metal Pressing operation, identified as EP02, with a maximum capacity of 45,534.5 tons of metal per year;
  - (3) Spot welding, identified as EP03, with a maximum usage of 25,290 tons of weld per hour;
  - (4) Arc welding, identified as EP04, with a maximum usage of 705 tons of weld per year;
  - (5) Laser cutting, identified as EP05, with a maximum capacity of 1786 tons of metal per year; and
  - (6) Metal cleaning, identified as EP06, with a maximum usage of 4,642,800 gallons of aqueous solution per year.
- (b) One (1) Electrodeposition Coating, E-coat System, identified as EP07, with a maximum capacity of 105 automotive parts per hour. One (1) natural gas-fired paint dryer, identified as EP08, with a heat input capacity of 4.366 Million British Thermal Units per hour (mmBtu/hr). This paint dryer is controlled by a 3.572 mmBtu/hr afterburner; and
- (c) One (1) natural gas-fired steam boiler, identified as EP09, with a heat input capacity of 3.348 mmBtu/hr.

#### Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
#1	EP06- Metal Cleaning (2 stacks)	2 @ 36.09	1 @ 1.64	2 @ 100,000	2 @ 150

#2	EP07- Electrodeposition Coating	36.09	1.64	211,887	ambient
#3	EP08- Dryer & Afterburner	36.09	1.64	254,264	392
#4	EP09- Steam Boiler	42.65	1.64	12,500	375

## Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on July 26, 2000, with additional information received on August 16, 2000, and information received via e-mail on August 22, and 23, 2000.

## Emission Calculations

- (a) Natural Gas Combustion: See page 1 and 2 of 3 TSD Appendix A for detailed emission calculations.
- (b) Electrodeposition Coating, E-coat System. The coated parts are oven dried. It is assumed that 70% of the VOC is emitted from the E-coat system prior to the dryer, the remaining 30% of the VOC is emitted during drying operation, which is controlled by an afterburner (destruction efficiency = 90%): See page 3 of 3 TSD Appendix A for detailed uncontrolled emission calculations.

Total Controlled Emissions from Coating Operation:

E-coat: 70% (10.01 tons/yr)	=	7.0 ton/yr
Dryer: 30% (10.01 tons/yr)	=	3.0 ton/yr (100 - 90%/100%)
	=	0.30 ton/yr
Total Controlled Emissions	=	7.3 tons/yr

- (c) Blanking Press Operation:  
 Steel coils, and steel and aluminum sheets is received for manufacturing. Steel will be formed by various blanking presses, shear presses and forming presses. The steel will be further assembled by adding pre-formed piping. This operation has negligible emissions, at 0.001 lb/ton of metal pressed.

PM/PM10	=	51,242 tons metal/yr * 0.001 lb/ton * ton/2000 lb
	=	0.025 ton/yr

- (d) Welding Operation:

- (1) Arc welding - Using Emission Factor from AP-42, Table 12.19-1, SCC-30905354

PM/PM10	=	150 sta * 1.073 lb/hr/sta
	=	160.95 lb/hr
	=	160.95 lb/hr * 15.1 lb PM10/1000 lb elec * ton/2000 lb *
		8760 hrs/yr

= 10.6 tons/yr

(2) Spot Welding - Uses heat induction to melt the parts at the point of contact. Using Emission factor from American Welding Society Fumes and Gases in the Welding Environment (1979, reprinted 1987) Table 2.2 and 2.8.

(3) PM/PM10 =  $25,290 \text{ welds/hr} \times 3 \times 10^{-6} \text{ lb molten metal/weld} \times \text{ton/2000 lb} \times 23.84 \text{ lb PM10/ton molten metal} \times \text{ton/2000 lb} \times 8760 \text{ hrs/yr}$   
 = 0.004 ton/yr

(e) Metal Cleaning:

The Emission Factor (Ef) of 0.0125 pound of PM10 per gallon of cleaner, was obtained from a similar water submersion metal cleaning operation. The cleaner is mixed 1:100 by volume with water. Therefore, the Ef is 0.000125 lb PM10/gallon of water consumed.

PM/PM10 =  $4,642,800 \text{ gallons/yr} \times 0.000125 \text{ lb/gal} \times \text{ton/2000 lb}$   
 = 0.03 ton/yr

SUMMARY OF EMISSIONS (TONS/YEAR)							
Pollutant	Fabrication		Metal Cleaning	Coating Operation		Combustion Emissions	TOTAL EMISSIONS
	Metal Pressing	Welding		E-Coat	Dryer		
PM	0.025	10.6	0.03	0.0	0.0	0.1	10.75
PM10	0.025	10.6	0.03	0.0	0.0	0.4	11.06
VOC	0.0	0.0	0.0	7.0	3.0	0.3	10.3
NOx	0.0	0.0	0.0	0.0	0.0	5.0	5.0
SO2	0.0	0.0	0.0	0.0	0.0	0.03	0.03
CO	0.0	0.0	0.0	0.0	0.0	4.1	4.1

### New Source Potential To Emit Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	10.75
PM-10	11.06
SO <sub>2</sub>	0.03
VOC	10.3
CO	4.1
NO <sub>x</sub>	5.0

## Justification for Level of Approval

The source's potential to emit (as defined in 326 IAC 2-7-1(29)) of Particulate Matter Less Than Ten Microns (PM<sub>10</sub>) are equal to or greater than five (5) tons per year but less than 25 tons per year. Pursuant to 326 IAC 2-5.1-2, the new source is issued a Registration.

## Source Status

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls.

Limited/Controlled Potential to Emit (tons/year)							
Process/facility	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Metal Pressing	0.025	0.025	0.0	0.0	0.0	0.0	0.0
Welding	10.6	10.6	0.0	0.0	0.0	0.0	0.0
Metal Cleaning	0.03	0.03	0.0	0.0	0.0	0.0	0.0
Coating Operation	E-Coat	0.0	0.0	0.0	7.0	0.0	0.0
	Dryer	0.0	0.0	0.0	0.3	0.0	0.0
Combustion	0.1	0.4	0.03	0.3	4.1	5.0	0.0
Total Emissions	10.75	11.06	0.03	7.6	4.1	5.0	0.0

- (a) This new source is **not** a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

## County Attainment Status

The source is located in Morgan County.

Pollutant	Status (attainment, maintenance attainment, or unclassifiable; severe, moderate, or marginal nonattainment)
PM-10	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	not determined

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Morgan County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Morgan County has been classified as attainment or unclassifiable for all the criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.



## Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons/year.

This is the first air approval issued to this source.

## Federal Rule Applicability

- (a) New Source Performance Standards (NSPS)
  - (1) 40 CFR Part 60.40s, Subpart Dc - Standards of Performance for Small Industrial- Commercial-Institutional Steam Generating Units- This rule applies to steam generating units that have maximum heat input capacity of 100 mmBtu/hr or less, but greater than 10 mmBtu/hr. The proposed natural gas-fired steam boiler, identified as EP09 is not subject to this rule because its heat input capacity is less than 10 mmBtu/hr.
  - (2) There are no other New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) National Emission Standards for Hazardous Air Pollutants (NESHAPs)
  - (1) 40 CFR Part 63.460, Subpart T - Halogenated Emission Standards for Halogenated Solvent Cleaning. One (1) metal cleaning, identified as EP06 is not subject to this NESHAP, because it will utilize aqueous solution and not halogenated solvent in the cleaning process.
  - (2) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR art 63) applicable to this source.

## State Rule Applicability - Entire Source

- (a) 326 IAC 5-1 (Visible Emissions Limitations)  
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:
  - (1) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
  - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

### State Rule Applicability - Individual Facilities

- (a) 326 IAC 8-2-9 (Miscellaneous Metal Coating)  
Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coatings used by the Electrodeposition Coating, E-coat System, EP07 shall be limited to 3.5 pounds of VOC per gallon of coating less water for extreme performance coatings. The source is in compliance with this limit even without the use of the afterburner.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

- (b) 326 IAC 8-3 (Organic Solvent Degreasing Operations)  
The one (1) metal cleaning, identified as EP06 is not subject to this rule, because it will utilize aqueous solution and not organic solvent in the cleaning process.

- (c) 326 IAC 6-3-2 (Process Operations)  
The rule mandates a PM emission limit on the welding operation using the following equation:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$\begin{aligned} E &= 4.10 P^{0.67} \\ &= 4.10 \frac{(6,593 + 160.95)^{0.67}}{2000} \\ &= 9.3 \text{ lb/hr} \end{aligned}$$

where E = rate of emission in pounds per hour and  
P = process weight rate in tons per hour  
= ( 6,593 wt. of metal) + (160.95 wt. of weld)  
= 6,754 lb/hr

The source is in compliance with the rule, since the PM emitted by the welding process is less than the PM allowable emissions.

- (d) 326 IAC 6-2 (PM Allowable Emission Limit for Indirect Heating)  
(1) The proposed new steam boiler, identified as EP09, with a heat input capacity of 3.348 mmBtu/hr is subject to 326 IAC 6-2-4. This rule mandates a PM emission limit using the following equation:

$$\begin{aligned} P_t &= 1.09/Q^{0.26} \\ &= 0.79 \text{ lb/mmBtu, This limit shall in no case exceed } 0.6 \text{ lb/mmBtu} \end{aligned}$$

Where: P<sub>t</sub> = PM emission limit in lb/mmBtu  
Q = Total source operating capacity in mmBtu/hr  
= 3.348 mmBtu/hr

Using natural gas as fuel:  
1.9 lb/MMCF \* MMCF/1,000 mmBtu = 0.0019 lb/mmBtu

The boiler is in compliance, since its emitting less than the PM limit.

- (2) The various heater are not subject to this rule, because they are not sources of indirect heating.

## **Conclusion**

The construction and operation of this metal automotive components and assemblies manufacturing plant shall be subject to the conditions of the attached **Registration 109-12538-00053**.

**Appendix A: Emissions Calculations**  
**Natural Gas Combustion Only**  
**MM BTU/HR <100**  
**Small Industrial Boiler**

Page 1 of 3 TSD App A

**Company Name** TOA (USA) LLC  
**Address City** Highway 67 South, Mooresville, IN  
**Registration I** 109-12538-00053  
**Reviewer:** Aida De Guzman  
**Date Application** July 26, 2000

Dryer - 4.366 mmBtu/hr  
 Afterburner - 3.572 mmBtu/hr

Heat Input Capacity  
 MMBtu/hr

Potential Throughput  
 MMCF/yr

7.9
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69.5369

Pollutant						
Emission Factor in lb/MMCF	PM* 1.900	PM10* 7.600	SO2 0.600	NOx 100.000 **see below	VOC 5.500	CO 84.000
Potential Emission in tons/yr	0.066	0.264	0.021	3.477	0.191	2.921

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton  
 above  
 emission

**Appendix A: Emissions Calculations  
Natural Gas Combustion Only  
MM BTU/HR <100  
Small Industrial Boiler**

Page 2 of 3 TSD App A

**Company Name** TOA (USA) LLC  
**Address City** Highway 67 South, Mooresville, IN  
**Registration I** 109-12538-00053  
**Reviewer:** Aida De Guzman  
**Date Application** July 26, 2000

Boiler - 3.348 mmBtu/hr

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

3.3

29.3

Pollutant						
Emission Factor in lb/MMCF	PM* 1.900	PM10* 7.600	SO2 0.600	NOx 100.000 **see below	VOC 5.500	CO 84.000
Potential Emission in tons/yr	0.028	0.111	0.009	1.466	0.081	1.232

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

### Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton  
above  
emission

**Appendix A: Emissions Calculations  
VOC and Particulate  
From Surface Coating Operations**

**Company** Nai TOA (USA) LLC  
**Address City IN Zip:** Highway 67 South, Mooresville, IN  
**Registration I** 109-12538-00053  
**Reviewer:** Aida De Guzman  
**Date Application Receiv** July 26, 2000

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficienc y
<b>EP07 booth</b>																
CorMax VI Black	9.3	59.49%	57.2%	2.3%	63.7%	33.52%	0.10410	105.000	0.58	0.21	2.29	54.84	10.01	0.00	0.62	100%

**State Potential Emissions**

**Add worst case coating to all solvents**

<b>2.29</b>	<b>54.84</b>	<b>10.01</b>	<b>0.00</b>
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**Controlled Potential Emissions (Afterburner as Control, 90% overall efficiency)**

<b>0.229</b>	<b>5.48</b>	<b>1.0</b>
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**METHODOLOGY**

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) \* Weight % Organics) / (1-Volume % water)  
Pounds of VOC per Gallon Coating = (Density (lb/gal) \* Weight % Organics)  
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)  
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)  
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)  
Particulate Potential Tons per Year = (units/hour) \* (gal/unit) \* (lbs/gal) \* (1- Weight % Volatiles) \* (1-Transfer efficiency) \*(8760 hrs/yr) \*(1 ton/2000 lbs)  
Pounds VOC per Gallon of Solids = (Density (lbs/gal) \* Weight % organics) / (Volume % solids)  
Total = Worst Coating + Sum of all solvents used